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(58) Field of search

UK CL (Edition K) **F4R RCAA RE**

INT CL⁵ **F21M**

(54) **An optical unit for a vehicle, having an embellisher**

(57) An optical unit for a motor vehicle, for example comprising a headlamp (P) and a direction indicator (F) behind a common cover glass (12), has two reflectors (16, 22) with a free space (E) between them. A reflective embellisher (24) conceals this space, and has a curved surface such that its appearance when seen through the glass is homogeneous with that of the adjacent reflectors, the curved surface lying generally parallel to the cover glass (12).

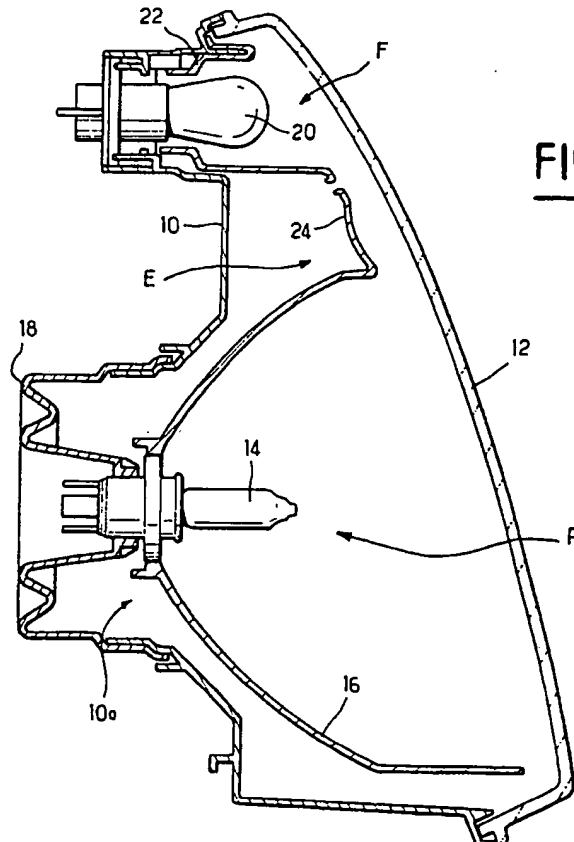


FIG.1

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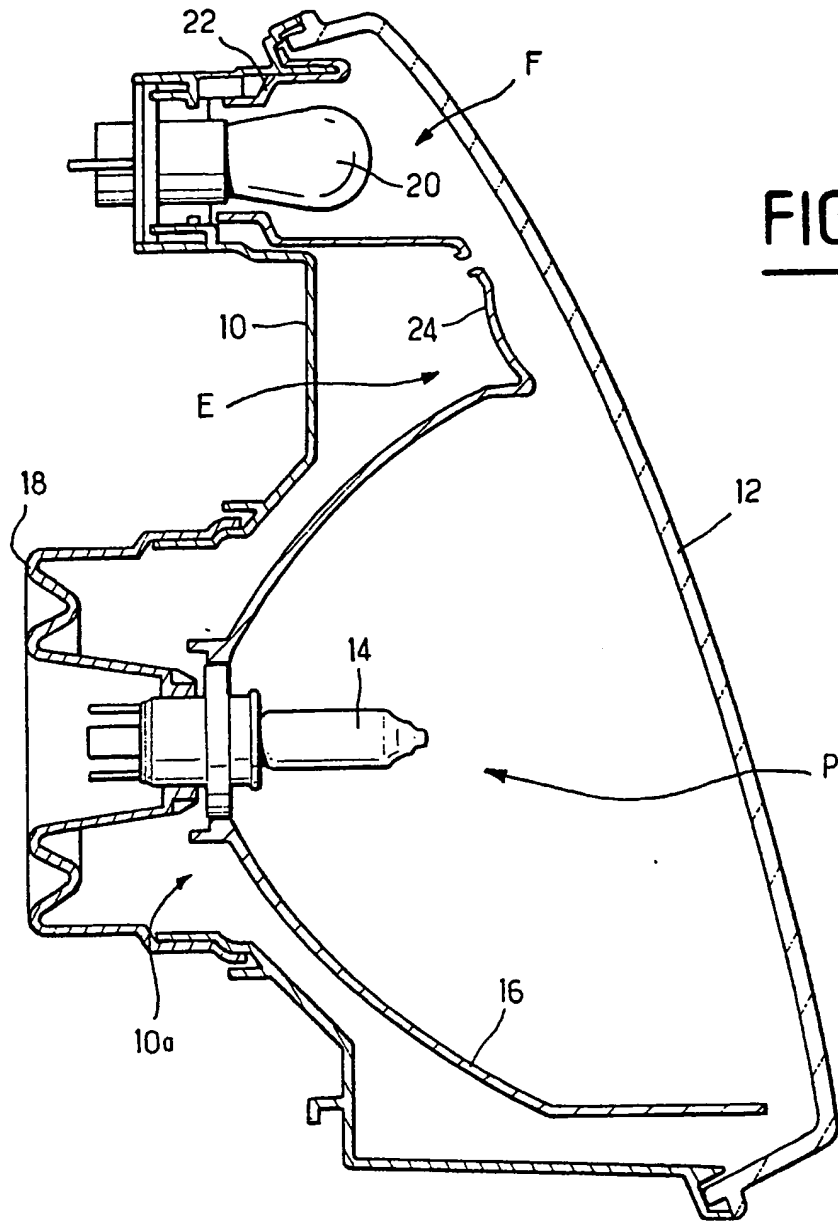


FIG. 1

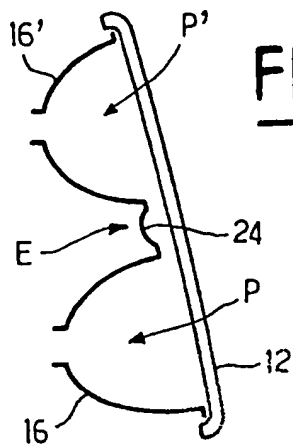


FIG. 3

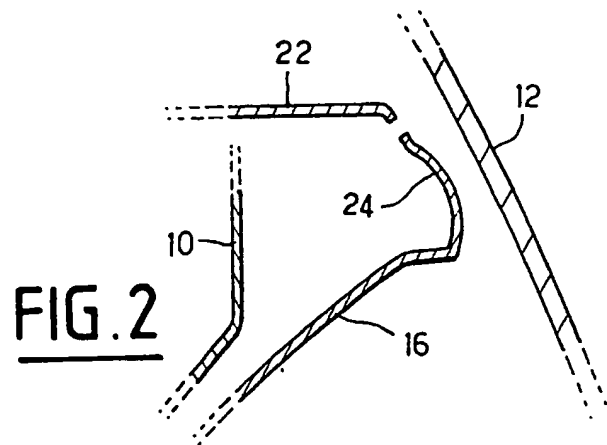


FIG. 2

AN OPTICAL UNIT FOR A MOTOR VEHICLE, HAVING AN IMPROVED EMBELLISHER

This invention relates generally to optical units for motor vehicles, that is to say lighting units such as (for example) headlamps.

In optical units comprising one or more lighting devices, and in particular in an optical unit arranged for mounting in the front of the vehicle and including a headlamp, with an indicating display, such as an intermittent direction indicator, being mounted by the side of the headlamp, it is necessary (either for structural reasons or in order to comply with regulations) to leave a free space at the side of the headlamp or between the headlamp and the direction indicator.

In order to prevent this free space giving the impression, when seen through the glass, of a dark region by comparison with the relatively brilliant reflector or reflectors, when the lighting devices are extinguished and seen from the outside, being subjected to incident light from outside, it is known to conceal this space by means of an embellisher. This embellisher may for example be of metallised plastic material such as to offer a degree of brilliance which is comparable with that of the neighbouring reflector or reflectors. However, the conventional form of construction for such an embellisher is in the form of an essentially flat surface which is located relatively close to the closure glass of the optical unit. As a result, it tends to be much brighter, under the conditions of observation described above, than the neighbouring reflector or reflectors. Thus the desired homogeneity of appearance between the embellisher and the reflector or reflectors is in fact not achieved with such an embellisher.

An object of the present invention is to overcome this drawback, to which end, according to the invention, in an optical unit for a motor vehicle, comprising at least one lighting device including a reflector and a closure glass, with a free space being defined adjacent to a said reflector, a reflective embellisher is provided for covering the said space, the embellisher having a curved surface orientated essentially parallel to the cover glass and being such that its appearance when seen through the glass is substantially homogeneous with that of the neighbouring reflector.

The surface of the embellisher may be either concave or convex.

Preferred embodiments of the invention will now be described, by way of example only and with reference to the accompanying drawings, in which:-

Figure 1 is a general assembly view, in horizontal cross section, of an optical unit in a first embodiment of the invention;

Figure 2 is a view in horizontal cross section showing part of the optical unit in a second embodiment of the invention; and

Figure 3 is a view in horizontal cross section showing, diagrammatically, a further modification.

Reference is first made to Figure 1, in which an optical unit for mounting in the front of a motor vehicle comprises a housing 10 which is closed at the front by a glass 12 and which contains, side by side, a headlamp P and an indicator display F. The headlamp may for example be a conventional headlamp of the kind having a main beam and a dipped beam,

while the display F is typically an intermittent direction indicator. The glass 12 is a single component which is common to both the headlamp and the direction indicator.

The headlamp essentially comprises a lamp 14 and a reflector 16. The housing 10 has an aperture 10a in line with the lamp 14, and is closed by a removable hood 18 which enables access to be obtained through the back of the reflector 16, especially for purposes of replacing the lamp 14. The direction indicator F comprises a lamp 20 and a reflector 22. As can be seen in Figure 1, a relatively large space E, which is typically of several centimetres, exists between the opposed side edges of the two reflectors 16 and 22, for reasons which need not be explained here.

In the first embodiment of the invention seen in Figure 1, this space E is concealed by an embellishing element 24 having a curved profile when seen in horizontal cross section, being in this example outwardly concave. The embellisher 24 prevents a dark and ugly zone being visible when the unit is extinguished and seen from the front. In vertical cross section the profile of the embellisher 24 may be either straight or curved, but it is preferably so designed as to follow the vertical profile of the glass in the same vertical cross section, being essentially parallel with the glass.

Under these circumstances, when the unit is seen from outside, the headlamp and the direction indicator being extinguished, then under conditions of incident light, the appearance of the embellisher 24 is homogeneous with the appearance of the two adjacent reflectors. More precisely, the curvature that is given to the embellisher enables the incident light to be diffused over a substantial angular interval, thus reducing its general brilliance so as to

make it essentially comparable with that of the reflectors. In this way, when the optical unit is exposed to external incident light, its appearance is more regular over its whole extent. This has a marked effect on its aesthetic appearance.

In this example, the embellisher 24 is made of a plastics material having a metallised outer surface, and is a lateral extension of the headlamp reflector 16. However, the embellisher could also be made integral with the reflector 22 of the direction indicator, or might even be a separate component.

In the embodiment shown in Figure 2, the embellisher 24 is convex instead of being concave. However, the effect is similar.

Referring now to Figure 3, this shows part of the reflectors 16, 16' of two headlamps P, P' which are separated by a free space E. In this example, the embellisher 24 is fixed to both reflectors so as to form a monobloc assembly. In this case the embellisher may be made of a metallised plastic material integral with the reflectors.

The present invention is of course in no way limited to the embodiments described above and shown in the drawings, but embraces any form of the invention within the scope of the Claims. In particular, an embellisher in accordance with the present invention may be used in any kind of situation in which one or more reflective surfaces are separated by an empty space.

CLAIMS

1. An optical unit for a motor vehicle, comprising at least one lighting device including a reflector and a closure glass, with a free space being defined adjacent to a said reflector, wherein a reflective embellisher is provided for covering the said space, the embellisher having a curved surface orientated essentially parallel to the cover glass and being such that its appearance when seen through the glass is substantially homogeneous with that of the neighbouring reflector.
2. An optical unit according to Claim 1, wherein the surface of the embellisher is concave outwards.
3. An optical unit according to Claim 1, wherein the surface of the embellisher is convex outwards.
4. An optical unit according to any one of Claims 1 to 3, wherein the embellisher is fixed with respect to the reflector.
5. An optical unit according to any one of Claims 1 to 4, comprising a pair of headlamps, wherein the said free space lies between the adjacent edges of the reflectors of the two respective headlamps, with the embellisher being fixed with respect to both reflectors.
6. An optical unit for a motor vehicle, substantially as described in the foregoing description with reference to Figure 1 of the accompanying drawings.
7. An optical unit substantially described in the foregoing description with reference to Figure 2 or Figure 3 of the accompanying drawings, being in other respects

substantially as described with reference to Figure 1 of the said drawings.

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Examiner's report to the Comptroller under
Section 17 (The Search Report)

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Relevant Technical fields

(i) U.K. CI (Edition K) F4R (RCAA, RE)

(ii) Int CL (Edition 5) F21M

Search Examiner

MR K MILNE

Databases (see over)

(i) UK Patent Office

(ii)

Date of Search

25 JUNE 1992

Documents considered relevant following a search in respect of claims

1-7

Category (see over)	Identity of document and relevant passages	Relevant to claim(s)
A	GB 2247311 A (KOITO)	

Category	Identity of document and relevant passages	Relevant to claim(s)

Categories of documents

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